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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/887,056

06/25/2001

Takeshi Yoshimoto

210300US2S

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05/06/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
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EXAMINER

PEREZ, ANGELICA

ART UNIT

PAPER NUMBER

2684

2

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/887,056

Applicant(s)

YOSHIMOTO, TAKESHI

Examiner

Angelica M. Perez

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2001.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-30 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☒ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-22 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Sugar (Sugar et al.; WO 99/09,721).

Regarding claims 1, 7 and 13, Sugar teaches of a radio communication system (figure 1) and electronic apparatus (column 2, lines 27-29) and semiconductor (page 5, lines 18-20) comprising: a radio reception unit for receiving a radio signal (figure 1, items 100 and 101), extracting a characteristic of the received radio signal (page 5, lines 30-31), and converting the received radio signal into a reception signal (lines 3 and 4 of the abstract and page 5, lines 21-29); and a reception signal processing unit for converting the reception signal into reception data on the basis of the extracted

Art Unit: 2684

characteristic of the radio signal (lines 6 and 7 of the abstract and pages 5 and 6; lines 29-31 and 1-8, respectively).

Regarding claims 2, 8, 17, 19 and 21, Sugar teaches all the limitations according to claims 1, 7 and 13. In addition, Sugar teaches where the radio reception unit comprises a receiver for receiving the radio signal (lines 1-3 of the abstract), a radio signal characteristic extractor for extracting the characteristic of the received radio signal (figure 1, item 103; pages 5 and 6, lines 21-30 and 1-8, respectively), and a reception radio signal converter for converting the received radio signal into the reception signal (page 5, lines 5-8, 15-18 and 26-29, and figure 3, item 307; where the function of demodulating takes place), and the reception signal processing unit comprises a demodulator for demodulating the reception signal by selecting a demodulation scheme on the basis of the extracted characteristic of the radio signal (page 5, lines 26-29), a reception communication protocol processing unit (figure 1, item 103) for executing a communication protocol process of the demodulated reception signal by selecting a communication protocol processing scheme on the basis of the extracted characteristic of the radio signal (page 5 and 6, lines 29-31 and 1-8, respectively), and a decoder for decoding the reception signal (page 6, lines 2-6), that has undergone the communication protocol process, by selecting a decoding scheme on the basis of the extracted characteristic of the radio signal (page 5, lines 29-31 and page 6, lines 1-2).

Regarding claims 3, 9 and 14, Sugar teaches all the limitations according to claim 2, 8 and 13. Also, Sugar teaches where the reception radio signal converter

Art Unit: 2684

converts the received radio signal into the reception signal by selecting a conversion scheme on the basis of the extracted characteristic of the radio signal (page 6, lines 2-6).

Regarding claims 4, 10 and 15, Sugar teaches all the limitations according to claim 1, 7 and 14. Sugar further teaches of a transmission signal processing unit for converting transmission data into a transmission signal on the basis of the extracted characteristic of the radio signal (page 5, lines 21-30); and a radio transmission unit for converting the transmission signal into a radio signal, and transmitting the converted radio signal (pages 5 and 6, lines 15-32 and 1-8, respectively).

Regarding claims 5, 11, 18, 20, 22, Sugar teaches all the limitations according to claim 4, 10 19 and 21. Sugar further teaches where the transmission signal processing unit comprises an encoder for encoding the transmission data by selecting an encoding scheme on the basis of the extracted characteristic of the radio signal (page 6, line 2-8), a transmission communication protocol processing unit for executing a communication protocol process of the encoded transmission data by selecting a communication protocol processing scheme on the basis of the extracted characteristic of the radio signal (page 5, lines 21-31 and page 6, lines 1-2), and a modulator for modulating the transmission data, that has undergone the communication protocol process (page 6, lines 21-30), by selecting a modulation scheme on the basis of the extracted characteristic of the radio signal, and said radio transmission unit comprises a transmission radio signal converter for converting the modulated transmission data into a radio signal (page 5, lines 26-29), and a radio transmitter for transmitting the

converted radio signal (page 5, lines 21-29; where modulation and conversion are inherent steps of digital processing).

Regarding claims 6 and 12 and 16, Sugar teaches all the limitations according to claim 5, 11 and 15. Sugar further teaches where the transmission radio signal converter converts the modulated transmission data into the radio signal by selecting a conversion scheme on the basis of the extracted characteristic of the radio signal (page 5, line 21-31 and page 6, lines 1-6).

Regarding claim 30, Sugar teaches of a method (See abstract) comprising the steps of receiving a radio signal (figure 1, items 100 and 101 and lines 3-4 of the abstract), extracting a characteristic of the received radio signal (page 5, lines 30-31), and converting the received radio signal into a reception signal (lines 3 and 4 of the abstract and page 5, lines 21-29); and a reception signal processing unit for converting the reception signal into reception data on the basis of the extracted characteristic of the radio signal (lines 6 and 7 of the abstract and pages 5 and 6; lines 29-31 and 1-8, respectively); executing a transmission signal process of the encoded transmission data by selecting a communication protocol processing scheme on the basis of the extracted characteristic of the radio signal (page 5, lines 21-31 and page 6, lines 1-2); executing a transmission signal process of the encoded transmission signal by selecting a transmission signal processing scheme on the basis of the extracted characteristic of the radio signal (page 5, lines 29-31 and page 6, lines 1-2); converting the transmission signal, that has undergone the transmission signal process into a radio signal, by

selecting a conversion scheme on the basis of the extracted characteristic of the radio signal (page 5, line 21-31 and page 6, lines 1-6).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar in view of Shamlou (Shamlou et al.; US Patent No.: 6,690,949 B1).

Regarding claims 23, 25 and 27, Sugar teaches of a radio communication system (figure 1) and electronic apparatus (column 2, lines 27-29) and semiconductor (page 5, lines 18-20) comprising: a radio reception unit for receiving a radio signal (figure 1, items 100 and 101), extracting a characteristic of the received radio signal (page 5, lines 30-31), and converting the received radio signal into a reception signal (lines 3 and 4 of the abstract and page 5, lines 21-29); and a reception signal processing unit for converting the reception signal into reception data on the basis of the extracted characteristic of the radio signal (lines 6 and 7 of the abstract and pages 5 and 6; lines 29-31 and 1-8, respectively), and converting transmission data into a transmission signal on the basis of the extracted characteristic of the radio signal (page 5, lines 21-30); and a radio transmission unit for converting the transmission signal into a radio signal, and transmitting the converted radio signal (pages 5 and 6, lines 15-32 and 1-8, respectively).

Sugar does not teach of a modem/baseband reception/transmission signal processing unit for executing the functions described above.

In related art concerning a system and process for supporting multiple wireless standards with a single circuit architecture, Shamlou teaches of a modem/baseband reception/transmission signal processing unit (figure 5, item 150 and column 4, lines 7-25).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Sugar's signal extraction and transmission of signals system/apparatus with Shamlou's modem/baseband reception/transmission signal processing unit in order to obtain a simpler and more economical system and apparatus resulting from baseband utilization.


Regarding claims 24, 26 and 29, Sugar in view of Shamlou teaches all the limitations according to claims 23, 25 and 27. Also, Sugar teaches where the reception radio signal converter converts the received radio signal into the reception signal by selecting a conversion scheme on the basis of the extracted characteristic of the radio signal (page 6, lines 2-6), the radio transmission unit comprises a transmission radio signal converter for converting the transmission signal into a radio signal (page 5, line 21-31 and page 6, lines 1-6), and a transmission unit for transmitting the converted radio signal (page 5, lines 21-29) and the transmission radio signal converter converts the modulated transmission data into the radio signal by selecting a conversion scheme on the basis of the extracted characteristic of the radio signal (page 5, line 21-31 and page 6, lines 1-6).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 703-305-8724. The examiner can normally be reached on 7:15 a.m. - 3:55 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

  
Angelica Perez  
(Examiner)

  
NAY MAUNG  
SUPERVISORY PATENT EXAMINER

Art Unit 2684

April 28, 2004

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